Castilleja linariifolia

Castilleja

Publication of the Wyoming Native Plant Society

Mar 2022, Volume 41(1)

Posted at www.wynps.org

Physaria pachyphylla (thickleaf bladderpod) – under review for listing

By Bonnie Heidel, WYNDD

A rugged mustard in northern Big Horn County, Wyoming, *Physaria pachyphylla* (thickleaf bladderpod), became Wyoming's most recent plant placed in review for federal listing under the Endangered Species Act on 8 February 2022.

The U.S. Fish and Wildlife Service (2022) determined that the viability of *Physaria pachyphylla* may be threatened by a proposed gypsum mine in part of its largest known population in Montana, as presented in petition documents. The Service is initiating a status review.

-*Never heard of Physaria pachyphylla*? It is one of at least six species split out of *Lesquerella alpina* (Nutt.) Wats., described by Grady and O'Kane (2007), and presented in the *Flora of North America* (O'Kane 2010). The first collection of it was made by Peter Lesica in 1983 in Carbon County, Montana. In 2001, I collected it in Big Horn County, Wyoming in Bighorn Canyon National Recreation Area. Both collections were in the Pryor Desert that spans the state line. The species is distinguished by a combination of characteristics that include an upright stem, basal leaves distinct from petiole, pedicels not recurved and fruit not compressed (Heidel and O'Kane 2012).

More recently, in 2020, ecologists sampling vegetation in the Pryor Desert found a second Wyoming location, where they collected a voucher and photographs. They found it on BLM lands, about 10 miles from the point where first collected in 2001.

"Pachy-" is a prefix derived from the Greek word for "thick". While there are many thick-leaved plants in Wyoming, *Physaria pachyphylla* is the only one with this prefix in its species epithet. To see the 2020 photographs of the species and its habitat, go to: https://fieldguide.wyndd.org/?species=physaria%20pachyphylla .

Above: *Townsendia hookeri* (Hooker's Townsend daisy) brightens Wyoming basins, plains and foothills in early spring. By Robert and Jane Dorn. Wyoming Botanical Image Collection. Posted by Rocky Mountain Herbarium at: https://uwdigital.uwyo.edu/object/wyu9795

References

Grady, B.R. and S.L. O'Kane Jr. 2007. New species and combinations in Physaria (Brassicaceae) from western North America. Novon 17: 182-192.

Heidel, B. and S.L. O'Kane. 2012. *Physaria* species of Wyoming, Part 2. *Physaria* key. *Castilleja* 31(1): 5-7. http://www.wynps.org/newsletters/2012_10.pdf .

O'Kane, S.L. Jr. 2010. *Physaria*. In: Flora of North America Editorial Committee, eds. 1993+. *Flora of North America North of Mexico*. 20+ vols. New York and Oxford. Vol. 7, pp. 616-665.

U.S. Fish and Wildlife Service. 2022. Endangered and Threatened Wildlife and Plants; 90-day findings for three species. Federal Register 87(26): 7079-7083.

In this Issue:

Physaria pachyphylla 1
2022 Wildflower Weekend 3-6
Growing Native Plants: More Forbs for Dry to Moist Sites 7-8
Ethnobotany - *Arnica cordifolia*..... 9

WYNPS News

Mark your Calendars for the 2022 Wildflower Walk Weekend (also called the Annual Meeting)**:** Register now for our June 3-5, 2022 event in Thermopolis! It will include a Saturday evening presentation about "Restoring Shoshone Ancestral Food Gathering" including tribal speakers, option of a hands-on workshop to learn plant families, and an amazing menu of hikes radiating from Thermopolis. Registration is required, on-line or on the registration form in this issue (p. 6).

Please Renew! If you haven't had a chance to renew for 2022, please send in your renewal and registration at the same time.

New Column: See p. 9 for Meredith Taylor's new Ethnobotany column. Thanks, Meredith!

New WYNPS Board – 2022
President: Kristy Smith, Pinedale (smith.kristy217@gmail.com)
Vice-President: Maggie Eshleman (maggieeshleman@gmail.com)
Sec.-Treasurer: Dorothy Tuthill, Laramie (dtuthill@uwyo.edu)
Board-at-large: Paige Wolken, Cheyenne (paigewolken@yahoo.com) (2021-'22)
Greg Pappas, Laramie (Gregory.Pappas@usda.gov) (2022-'23)

Other Contacts:
Editor: Bonnie Heidel (bheidel@uwyo.edu)
Webmaster: Maggie Eshleman (maggieeshleman@gmail.com)
Sublette Chapter: Jill Randall, President (possum1b@yahoo.com)
Teton Plants: Amy Taylor, Treasurer; (tetonplants@gmail.com). Check the chapter homepage (https://tetonplants.org/) for upcoming events.

Treasurer's Report: Balance as of February 21: Scholarship = $2550; General = $9527.54; Total = $12,077.54

Next issue: Please send articles and announcements by 15 April to the address below:

Wyoming Native Plant Society
P.O. Box 2449

New Members: Please welcome the following new members to WYNPS: Kim Bartlett and John Fenton, Thermopolis; Russell Duncan, Saratoga; Kurt Flaig, Laramie; Esther Gilman-Kehrer, Laramie; Jennifer Guse, Whitefish, MT; Wanda Manley, Burns; Nancy Miller, Powell; Tristan Nunez, Laramie; Rick Smith, McHenry, MS; Kate Swisher, Jackson; Nancy Thomas, Normal, IL.

Message from the President

Hello from your new WYNPS president! I would like to thank Emma Freeland for helping to plant the seed for my nomination as President for 2022. I had recently completed an exciting and fulfilling field season with the Lander BLM office as a biological technician, where I often worked closely with Emma, when she reached out to me and suggested I put my name in the hat. Thank you for all your hard work and dedication to the Wyoming Native Plant Society, Emma. You have done amazing things for this organization, from sharing beautiful pictures of native flora on our Instagram page to spearheading this year's annual meeting. Thank you also to Katie for serving on the Board. We look forward to working with you both this year and into the future! I am honored to be serving in this position and to glean every bit of knowledge I can from this brilliant group of botanically inclined minds that make up the WYNPS Board.

As each day gets a little bit longer, I grow more excited for all that Spring will offer and look forward to our Annual Meeting in Thermopolis come June. I also look forward to fostering new relationships with fellow naturalists and exploring Wyoming native flora. Check out the exciting events we have planned for this year and see what fun activities are in store for the annual meeting. It's easy to register either online or via mail. Cheers to a great year ahead!

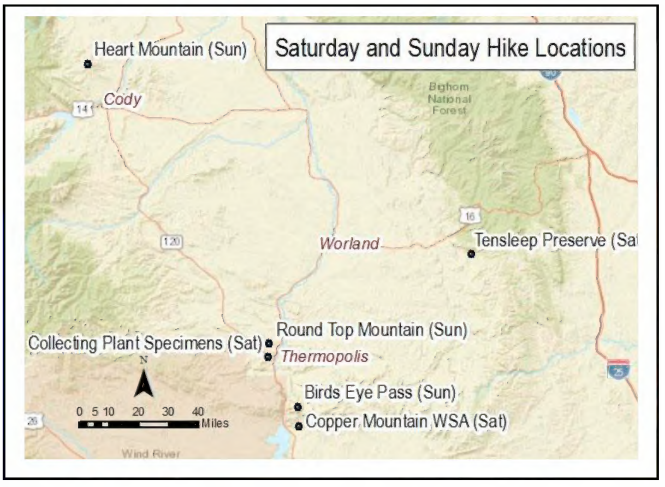
Kristy Smith

Contributors to this Issue: Robert Dorn, Emma Freeland, Bonnie Heidel, Kristy Smith, Meredith Taylor, Dorothy Tuthill.

Social Media: We are on Facebook as Wyoming Native Plant Society and Instagram as @wyomingnativeplantsociety. Follow us on either platform for WYNPS updates and native plant content.

Wyoming Native Plant Society Wildflower Weekend in Thermopolis June 3-5, 2022

Join us as we gather in Thermopolis, June 3-5, for a weekend of native plant hikes, workshops, and talks. Thermopolis has world class natural hot springs and spectacular geology, two conditions that contribute to an interesting and diverse suite of plant species. Hike options will include stunning wildflowers from desert to foothills to montane peaks, a diverse array of rare and endemic plants, and breathtaking views of the Bighorn Basin landscape. There will be something for everyone, from beginners to seasoned botanists. This information is also available at http://wynps.org/actitivies/2022-annual-meeting .



Schedule at a Glance:

- Friday 2-5 pm: Check-in at Thermopolis Community Hall
- Friday 3-5 pm: Plant Families Workshop at Thermopolis Community Hall
- Friday 6:30 pm - dusk: Hot Springs State Park Sunset Hikes
- Saturday 8-4 pm: Full Day Hikes and Workshops Leave from Thermopolis Community Hall
- Saturday 5-7 pm: Social Hour and Dinner at Thermopolis Community Hall
- Saturday 7 pm: Keynote Speaker Presentation at Thermopolis Community Hall
- Sunday 7-8 am: Members meeting at Thermopolis Community Hall
- Sunday 8:30 am: Full- and Half Day Hikes Leave from Thermopolis Community Hall
- Sunday 10:00 am: Participants from Cody meet Heart Mountain caravan from Thermopolis at Bomgaar's/McDonalds, Cody

Location: We have the Thermopolis Community Hall reserved for the weekend as our home base, located in downtown Thermopolis at 631 Big Horn St. Most hikes and events will occur at or leave from the Community Hall, except the Friday evening hikes in Hot Springs State Park.

Registration: Registration fee is $20/day or $40/weekend per person (kids free). The cost for the Saturday evening meal is separate (see info below). You can register by mail (see form, p. 6) or online.

COVID-19: While it is impossible to know what the COVID-19 scenario will look like in June, we will follow all recommended CDC guidelines during the weekend. Many events will take place outdoors, and participants are welcome to join for only those activities that are outdoors, and without carpooling.

Camping and Hotels: Members Kim Bartlett and John Fenton have generously offered their property for tent or RV camping. It is at 172 W Highway 120, Thermopolis. There is space for 5 RVs (no hookups) and 30 tent campers. The road into their property is firm but not graveled so can be a messy when wet. RVs will be on a leveled area, but tent camping will be in grassy areas without tree cover. Like many areas in the Bighorn Basin, the camping area does have cheatgrass, and we recommend campers be hyper-aware of not spreading seeds to hike locations, perhaps by bringing an extra pair of shoes separate from your hiking boots to wear while on their property. There will be two porta potties onsite, but campers should bring your own drinking water. Please indicate at registration if you plan to camp and for which nights. If you have questions, please contact Kim Bartlett at: bullfrogcreekfarms@gmail.com. A huge thanks to Kim and John for hosting us!

Note: Hotels in Thermopolis book up quickly. We recommend booking early if you plan to stay in a hotel. The Thermopolis Brewfest is happening on Saturday, so things may be busier than usual in a town that sees a lot of tourism on a normal weekend.

Food: All meals are on your own except Saturday evening dinner. The Saturday dinner will be takeout from local Thermopolis favorite Bangkok Thai. A variety of dishes will be available including a vegetarian/gluten free curry. Cost is $25 per dinner, due at registration. Participants are welcome to attend all Saturday evening events, even if not partaking in the dinner.

Other Information: Many of the weekend's events are plant walks outdoors in sometimes remote locations. We recommend sturdy shoes, sun protection, bug spray, and plenty of food and water. No pets are allowed at any of our events, except for service animals. Please make sure to arrive at hikes with shoes clean of mud and weed seeds so we don't accidentally spread noxious weeds into these unique botanical locations. Carpooling is recommended to lighten our impact on trailheads and the atmosphere.

Questions? Please contact us via email at WYNPS@WYNPS.org.

This event is open to everyone, but you must register to attend. Please register by May 27.

DETAILED SCHEDULE

Friday, June 3

2:00-5:00 pm: Check-in at the Thermopolis Community Hall

3:00-5:00 pm: **Learning Plant Families Workshop** at Thermopolis Community Hall

In a workshop co-hosted by the Red Dirt Master Gardeners, Restoration Scientist Maggie Eshleman will lead us through identification and key characteristics of the most common plant families in the Wyoming flora. The ability to recognize plant families is critical to successful field identification, and many native plants fall into one of several common families. Participants will learn the key family characteristics and use dissection and microscopy to identify these features on live plant specimens.

5:00-6:30: Dinner on your own

6:30 pm - dusk: **Hot Springs State Park Sunset Plant Walks**

Hot Springs State Park is a natural history wonder, claiming the world's largest mineral hot spring. Thermal features bubble from the ground and run into the Bighorn River, in a setting surrounded by rocky ridges and rugged topography. Join us as we spend the evening exploring the desert and riparian flora of the park. Park Superintendent Kevin Skates will give us a brief history of the area, and then we'll split into groups for evening strolls on park trails led by hike leaders Ernie Nelson and John Mionczynski. We meet at the parking lot of the Hot Springs Hotel and Spa (formerly Days Inn) located inside of Hot Springs State Park at 115 E Park St, Thermopolis, WY 82443. To find the meeting location, drive east through the main entrance to Hot Springs State Park on Park Street. Continue under the welcome sign, and cross the Bighorn River. The Hot Springs Hotel and Spa is the first building on your right, just a few hundred feet east of the river. Meet in the large parking lot on the east side of the building.

Saturday, June 4

7:30 am - 8 am: Check-in at the Thermopolis Community Hall - for those who did not on Friday

8 am: Meet at Thermopolis Community Hall for Saturday hikes. Saturday hikes are all-day events, and will aim to wrap up by about 4 pm.

Copper Mountain Wilderness Study Area

Join botanist Emma Freeland and geologist Kurt Imhoff as we explore the desert flora from the floor of the Wind River Basin to the jagged limestone peaks of the Copper Mountain Wilderness Study Area. As we admire botanical treasures, we will consider the influence that the geology has on the flora. We are likely to find *Cryptantha subcapitata* (Owl Creek miner's candle), an endemic plant restricted to a small area in the Wind River Basin. Other charismatic plants we can expect are a variety of *Penstemon*, *Petrophyton caespitosum* (rockmat), vivid *Castilleja angustifolia* (paintbrush) in all shades. We will cover 3-4 miles in very steep and rocky terrain.

Collecting Plant Specimens with the Rocky Mountain Herbarium (RM)

RM Director Dr. David Tank, Senior Curator Ernie Nelson, and Digital Curator Ben Legler will engage participants in one of the important activities that herbaria conduct - collecting! RM has a long tradition of conducting botanical surveys to document the diversity and distribution of vascular plants throughout Wyoming and the Rocky Mountains. During the WYNPS annual meeting we will have access to both the private land where we will be camping, and the state park, so we are excited to add to our knowledge of the regional flora with collections from these areas! This event is ideal for those interested in identification of all plants on the landscape and proper plant collecting and preservation techniques to document the flora. Working in small groups, we will

document the diversity of vascular plants in the area, and make collections that will be added to the RM. Morning and early afternoon will be outdoors, and the rest of the day will be spent pressing our collections. During the pressing process, we will discuss field identification of important groups and identify some of the more interesting collections of the day. The herbarium will supply presses, paper, etc. but if you have collecting tools (clippers, diggers) please bring them along.

Tensleep Preserve

Join The Nature Conservancy's staff as we explore Tensleep Preserve located on the southwestern flank of Wyoming's Bighorn Mountains. While slopes range from gentle to vertical in the canyons, and elevation ranges from 5000' to 8500', we will spend most of our time on a moderately strenuous hike at approximately 6,700'. We'll examine 500-plus year-old ponderosas, discuss post-burn habitats, and search for Bighorn Mountain endemics along the Tensleep Sandstone. You are welcome to cap off your visit with further walks within the 9,200-acre property.

5 pm: The Saturday evening program will begin with a **Social hour** at the Thermopolis Community Hall. Debrief from the day's botanical outings, try your hand at a botanical natural history quiz, and mingle. Please note that the Thermopolis Community hall is an alcohol-free space and we will respect their rule.

6 pm: **Dinner** at Thermopolis Community Hall will feature Bangkok Thai cuisine. Food will be served buffet style, with a variety of dishes including a vegetarian/gluten-free curry. Cost is $25 per dinner, due at registration. You are welcome to join us then even if you choose not to partake in the Thai food.

7 pm: **Keynote Speaker Presentation: Restoring Shoshone Ancestral Food Gathering.** Speakers: Caroline Mills, Vernetta Panzetanga, and John Mionczynski

Sunday, June 5

7 am - 8 am: **WYNPS Annual Members Meeting,** Thermopolis Community Hall. This meeting is the time we discuss things like the location of the next annual meeting. Coffee and pastries from Lazy Fox Bakery, Thermopolis will be provided.

8:30 am: Meet for Sunday hikes at Thermopolis Community Hall. Sunday hikes are a mix of half-day and full-day outings; see descriptions that follow.

Rare Plants of Heart Mountain, Cody - all day hike
Join biologist Destin Harrell and geologist Lisa Marks to explore the geologic and botanical hotspot of The Nature Conservancy's Heart Mountain. With its unusual limestone cap, Heart Mountain is a geologic puzzle, where older limestone lies atop younger strata. Heart Mountain supports one of the greatest concentrations of rare plants on private lands in Wyoming. Of particular interest are cushion plant communities on cliffs near its summit: *Shoshonea pulvinata*, *Eritrichium howardii*, *Kelseya uniflora*, and *Antennaria aromatica.* If the road is dry, we will hike to the summit from half way up, a steep hike of ca 1.5 miles. If the road is wet, the hike will start at the base, a 4 mile hike to the summit. High clearance, four wheel drive vehicles and carpooling are recommended. Please bring your bear spray. Caravan will leave Thermopolis at 8:30 am to meet Cody members in the parking lot of the McDonald's and Bomgaars at 10:00 am to carpool to the trailhead.

Round Top Mountain Relict Vegetation - half day hike. Join botanist Kristy Smith for a short, steep hike up Roundtop Mountain, a prominent feature of the Thermopolis skyline, standing about 600 feet above the town. Steep topography has precluded livestock access, so the vegetation on top of Roundtop is a rangeland relict. The summit has lush bunchgrasses, diverse forbs, and cushion plant communities on cliff edges, with stunning views of the Bighorn Basin. The hike is short and steep, with about 300 feet of elevation gain on a trail about ¼ mile. The parking area is accessible to all vehicles.

Birdseye Pass Wildflowers - half day hike
Throughout history and through the early 1900's, one of the major routes between the Wind River Basin and the Bighorn Basin was not through the rugged terrain of Wind River Canyon, but up and over Birdseye Pass. Natalie Wehner will lead us on an exploration of the diverse mountain big sagebrush and black sagebrush grasslands near the top of the pass, seeking penstemons, paintbrushes, several phlox species, and spring parsley. We will cover up to about a mile in easy to moderate terrain. Very low clearance vehicles are not recommended; there will be opportunities to carpool.

Hot Springs: Take some time while you are in Thermopolis to enjoy a soak at the Hot Springs. There are a few different options available for soaking, all right next to each other in Hot Springs State Park. The State Bath House is free and open to the public from 8 am-4 pm daily, with soak time limited to 20 minutes. There are also two privately-operated hot springs, Star Plunge and Hellie's TeePee and Spa. They are open daily, 9 am-9 pm, have entrance fees of app. $15.50, and you can soak as long as you want.

2022 WYNPS Annual Wildflower Weekend Registration Form

This event is open to the public; membership in the Society is not required. However, registration is required to attend. Please register by May 27 if possible. Service dogs only, please, on any of the hikes.

Registration fee is $20/person to attend for one day, or $40/person to attend for multiple days. Kids free!

Name(s): _____

Email Address: _____

For how many people are you registering? _____

Please circle the days you plan to attend: Friday Saturday Sunday

Camping

Members Kim Bartlett and John Fenton have generously offered their property at 172 W Highway 120 in Thermopolis for tent or RV camping. Please find details in the meeting announcement.

Do you plan to camp at Kim and John's? _____
If yes, which nights (circle each night you plan to camp): Friday Saturday
If yes, indicate number of tents and RVs: # of tents: _____ # RVs: _____

Events:

Check the events you plan to attend. You may change your hike preference at check-in, we just want to get an estimated head-count for each event. Please see maps and details in the meeting announcement.

FRIDAY

____Plant Families Workshop (3-5 pm)
____Hot Springs State Park Sunset Hikes (6:30 pm - sunset)

SATURDAY

____Copper Mountain Wilderness Study Area All Day Hike (8 am - 4 pm)
____Collecting Plant Specimens All Day Event (8 am - 4 pm)
____Tensleep Preserve All Day Hike (8 am - 4 pm)
____Social Hour and Dinner (5-7 pm)
____Restoring Shoshone Ancestral Food Gathering Presentation (7 pm)

SUNDAY

____WYNPS Members Meeting (7-8 am)
____Heart Mountain All Day Hike (Sunday), indicate caravaning preference below:
___I will meet to caravan from Thermopolis Community Hall at 8:30 am, or
___I will meet to caravan from McDonald's/Bomgaars in Cody at 10:00 am
____Round Top Mountain Relic Vegetation Half Day Hike (8:30 am - noon)
____Birdseye Pass Wildflowers Half Day Hike (8:30 am - noon)

Saturday Dinner from Bangkok Thai

Cost is $25 per dinner, **due at registration**. Participants are welcome to attend all Saturday evening events, even if not partaking in the Thai food dinner option.

Number of dinners I am ordering: _____

Payment

Please mail this form and a check to Wyoming Native Plant Society, P.O. Box 2449, Laramie, WY 82073, or register online at http://www.wynps.org/activities/2022-annual-meeting/.

Total enclosed to cover registration(s) and dinner(s): _____

Growing Native Plants

Part 43. More Forbs for Dry to Moist Sites

By Robert Dorn

Eriogonum umbellatum, Sulphurflower, is a perennial that forms loose mats of basal leaves to 3 feet across with many leafless flowering stems to 18 inches tall. The leaves are to 1.5 inches long and 1 inch wide and usually persist over winter when they turn reddish or purplish. The flowers are many shades of yellow, cream, or reddish and usually turn reddish or coppery as they age. They are to .25 inch long at the ends of the flowering stems in loose to dense rounded clusters. They appear from June to August depending on elevation. The plants occur naturally in open places or partial shade in the plains, basins, valleys, and mountains. They prefer full sun and well drained loamy soils but tolerate other soils. They are drought tolerant. It can be grown from seed sown outdoors in the fall. There are several cultivars in the nursery trade.

Eriogonum umbellatum, Adams Co., ID

Hedysarum boreale, Northern Sweetvetch, is a bushy perennial to 2 feet tall and wide. The leaves are compound with 7 to 15 leaflets each to 1 inch long and less than half as wide. The flowers are typical pea flowers but the keel is longer than the wings and often longer than the banner. They are pink to purple and loosely arranged along stalks from the leaf axils. Each flower is about .75 inch long and they appear from May to July. The plants occur naturally in dry, open places in the plains, basins, valleys, and mountains. They prefer full sun and moist to dry, well drained soils. It can be grown from seed. Scarify the seed before planting.

Hedysarum boreale, Crook County

Ipomopsis aggregata, Scarlet Gilia, is a biennial or short lived perennial to 3 feet tall but usually much shorter with one or rarely two stems per plant. The leaves are mostly basal forming a rosette. They are finely dissected and to 3 inches long. The flowers are red or various shades of pink to salmon, rarely white. They are trumpet shaped, to 2 inches long, and loosely arranged along the upper stem. They appear from May to August. The plants occur naturally in dry, open, often rocky places of the basins, valleys, and mountains. They prefer full sun and moist to dry, well drained soils. It can be grown from seed sown as soon as the seed matures. Cover lightly with soil to allow some light exposure. It is in the nursery trade.

Ipomopsis aggregata, Rio Blanco Co., CO

Penstemon strictus, Rocky Mountain Penstemon, is a perennial to 2.5 feet tall and 10 inches wide. The leaves are opposite, narrow, and to 6 inches long. The flowers are deep blue to purple, to 1.25 inches long,

and scattered along the upper third of the stem. They appear from June to August depending on elevation. The plants occur naturally in open areas to light shade in the basins and mountains. They prefer full sun to light shade and slightly moist to dry soils. It can be grown from seed sown outdoors when the seed is ripe. It can also be divided in spring and replanted with buds at the soil surface.

Penstemon strictus, Crook County

Thermopsis rhombifolia, Prairie Buffalopea, is a perennial to 18 inches tall but usually shorter. It is rhizomatous forming small patches. The leaves are palmately compound with 3 leaflets and a pair of large stipules resembling leaflets at the base of each leaf. The leaflets are to 1.5 inches long. The flowers are yellow, to .75 inch long, with 10-30 crowded on the upper stems. They appear in May and June. The plants occur naturally in dry, open areas in the plains, basins, and foothills, often along roadsides. They prefer full sun and dry to moist, well drained soils. It can be grown from seed which should be scarified before planting. It can also be grown from rootstock divisions. Seed is commercially available.

Thermopsis rhombifolia, Platte County

To see the above plants in color, go to the newsletter on the Society website.

Call for all Summer Hike Announcements

Please send your summer hike announcements by 15 April if you would like them to run in the May newsletter. Include information on destination, meeting place and time, the estimated length of hiking, ease or difficulty, name of the hike leader, and any special instructions for participants. WYNPS is a welcome co-sponsor of hikes and will announce hike events of other organizations if they, too, are focused on native plants and are open to the public.

ETHNOBOTANY - ***Arnica cordifolia***

By Meredith Taylor

(*Editor's note: Meredith Taylor has longstanding interests in our flora and fauna. She studied Ethnobotany with native people while serving in the Peace Corps in the Amazon, and joined the ranks of Certified Wyoming Naturalist in the first year of the program. She harvests an array of plants around her home and enjoys teaching Ethnobotany field classes for schools and non-profit organizations throughout the West.*

This article is first in a newsletter column series. It is for educational purposes and does not condone collecting of plants that readers cannot identify with certainty. Ethical wild plant collecting follows practices that tread lightly. Here is an outline of conscientious practices posted by a national forest in Colorado: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3822046.pdf . Check directly with the agency about their policies if you want to harvest native plants on public lands.

Heart-leaf arnica is a member of the sunflower family (Asteraceae), one of the largest families of plants found throughout the Western US and Canada. Its high altitude habitat ranges from Alaska to NM and California to Michigan, as well as Asia, Siberia and Europe in the Northern Hemisphere.

This perennial plant grows from 8 – 24" (20-60 cm) at 4000-10,000' (1200-3000 m) elevation. It grows as a forest carpet in the foothills and in partial shade amid submontane mixed conifers and subalpine meadows. Arnica's showy inflorescence consists of numerous yellow disk flowers surrounded by ray flowers, which can bloom from June through August. Below the single flower head are opposite and basal heart-shaped leaves with hairy bristles growing on long petioles. Plant propagation is by rhizomes and achenes. There are 13 species of *Arnica* in Wyoming according to the Wyoming checklist of the Rocky Mountain Herbarium.

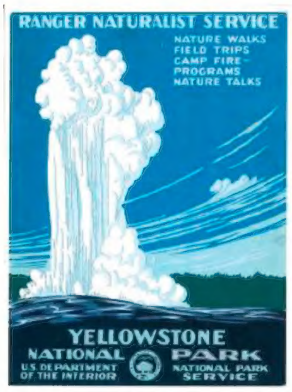
Arnica has long been used in traditional medicine for treatment of inflammatory diseases of the skin. This therapeutic plant was used to treat various ailments by ethnopharmacologists. According to scientific research, sesquiterpene lactones may be the principal compounds of Arnica preparations, which inhibit inflammatory processes to increase anti-inflammatory activity.

Sustainable mixed harvest of the Arnica flower and heart-shaped leaf should be conservative and selective by gently picking only one blossom or leaf from each plant. It is best to avoid pulling on the plant, so the shallow roots are not disturbed in the habitat. Walk carefully through the habitat to reduce impact, so Arnica plants are not trampled.

Arnica leaves and blossoms are used fresh or dried to make an oil infusion and anti-inflammatory, analgesic salve or in alcohol to make a tincture applied topically to reduce joint and muscle pain, swelling, sprains, insect bites and bruises. Arnica salves and tinctures have been reported by patients to be very effective in minimal time following daily application.

A Taste of Spring (Flora)

Have you checked out the digital library of the Rocky Mountain Herbarium? It includes singular leaflets and bulletins of the Herbarium such as "A Spring Flora of the Laramie Area", by C.L. Porter. 1949. The Digital Library is at: https://uwdigital.uwyo.edu/islandora/search/leaflets?type=dismax



Happy Birthday Yellowstone!

Celebrate the 150th Anniversary of Yellowstone National Park this year. Here are links to some of WYNPS "classic" features of Yellowstone National Park plants…and people.

YNP endemic plants: http://www.wynps.org/wp-content/uploads/Dec16_Castilleja_final_post.pdf
http://www.wynps.org/newsletters/2004_12.pdf
http://www.wynps.org/newsletters/1999_12.pdf

People:
http://www.wynps.org/newsletters/2015_12.pdf
http://www.wynps.org/2020/12/december-2020-castilleja/

WYOMING NATIVE PLANT SOCIETY MEMBERSHIP FORM

Date _____

Name _____

Address _____

Email _____

Please check all appropriate boxes:

[ ] New member
[ ] Renewing member
[ ] Check here if this an address change
[ ] Annual membership with email notification of newsletters: $10
[ ] Annual membership with mailed newsletters: $12
[ ] Annual membership with scholarship support and email notification of newsletters: $20
[ ] Annual membership with scholarship support and mailed newsletters: $22
[ ] Life membership with email notification of newsletters: $300
[ ] Life membership with mailed newsletters: $300

In addition to the statewide organization, we have two chapters. Membership in chapters is optional; chapter members must also be members of the statewide organization.

[ ] Teton Plants Chapter annual membership: $5
[ ] Sublette Chapter annual membership: $5
[ ] Additional donation of $_____

Total enclosed: _____

Please write checks to **Wyoming Native Plant Society**

Wyoming Native Plant Society
P.O. Box 2449
Laramie, WY 82073